

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION**

SOLAS OLED LTD., an Irish corporation,

Plaintiff,

v.

LG DISPLAY CO., LTD., a Korean corporation; LG ELECTRONICS, INC., a Korean corporation; and SONY CORPORATION, a Japanese corporation,

Defendants.

CASE NO. 6:19-CV-00236-ADA

JURY TRIAL DEMANDED

**ANSWER AND COUNTERCLAIMS OF DEFENDANT
LG DISPLAY CO., LTD. TO PLAINTIFF'S SECOND AMENDED COMPLAINT**

Defendant LG Display Co., Ltd (“LG Display”) answers each paragraph of the Second Amended Complaint of Solas OLED Ltd. (“Solas” or “Plaintiff”), alleging infringement of U.S. Patent Nos. 7,432,891, 7,573,068, and 7,907,137 (collectively, the “Patents-in-Suit”), and provides defenses and counterclaims as follows:

ANSWER

1. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 1 including the preceding heading, and, on that basis, denies them.

2. LG Display admits that a copy of a document purporting to be U.S. Patent No. 7,432,891 (the “’891 patent”) is attached to the Second Amended Complaint. LG Display admits that a copy of a document purporting to be U.S. Patent No. 7,573,068 (the “’068 patent”) is attached to the Second Amended Complaint. LG Display admits that a copy of a document purporting to be U.S. Patent No. 7,907,137 (the “’137 patent”) is attached to the Second Amended Complaint. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 2, and, on that basis, denies them.

3. LG Display admits that LG Display is a corporation organized under the laws of the Republic of Korea. LG Display admits that LG Electronics, Inc. (“LG Electronics”) is a corporation organized under the laws of the Republic of Korea. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 3 including the preceding heading, and, on that basis, denies them.

4. LG Display admits that Plaintiff purports to identify general categories of accused products in paragraph 4. Except as expressly admitted, LG Display denies the remaining allegations, if any, contained in paragraph 4.

5. LG Display admits that it designs, produces, and sells OLED display panels. LG Display admits that LG Electronics sells products incorporating LG Display OLED display panels. LG Display admits that Sony Corporation (“Sony”) sells products, including OLED televisions, incorporating LG Display OLED display panels. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 5, and, on that basis, denies them.

6. LG Display admits that this Court has subject matter jurisdiction over Plaintiff’s claims made pursuant to 35 U.S.C. §§ 271 and 281, *et seq.* LG Display denies that it has committed or is committing any act of patent infringement within this or any other District. Except as expressly admitted, LG Display denies the remaining allegations, if any, contained in paragraph 6 including the preceding heading.

7. For purposes of this action only, LG Display will not dispute personal jurisdiction of this Court. LG Display denies that it has committed or is committing any act of patent infringement within this or any other District. Except as expressly admitted, LG Display denies the remaining allegations, if any, contained in paragraph 7.

8. LG Display admits that it designs, produces, and sells OLED display panels that are incorporated into products sold by LG Electronics and Sony Corporation. Except as expressly admitted, LG Display denies the remaining allegations contained in paragraph 8.

9. LG Display admits that it and LG Electronics are Korean corporations. For purposes of this action only, LG Display will not dispute whether venue is proper in this Court under 28 U.S.C. § 1391(c)(3). No response is otherwise required to paragraph 9. To the extent that the Court deems a response necessary, LG Display denies the allegations, if any, contained in paragraph 9.

10. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 10 including the preceding heading, and, on that basis, denies them.

11. LG Display is without knowledge or information regarding the origin of the purported “image and circuit diagram” in paragraph 11 and, at least on that basis, denies that the purported “image and circuit diagram” is an accurate representation of the accused products. Except as expressly admitted, LG Display denies the remaining allegations contained in paragraph 11.

12. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 12, and, on that basis, denies them.

13. No response is required to paragraph 13 including its preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 12 of the Second Amended Complaint as set forth above.

14. LG Display admits the allegations contained in paragraph 14.

15. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 15, and, on that basis, denies them.

16. Denied.

17. Denied.

18. Denied.

19. LG Display admits that the '891 patent purports to claim priority to foreign application DE10254511. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 19, and, on that basis, denies them.

20. LG Display admits that KR100768047B1 is a Korean patent titled “OLED display apparatus and drive method thereof” that cites DE10254511B4 and identifies “LG.PHILIPS LCD CO., LTD” as the applicant and a filing date of November 30, 2005. LG Display admits that KR101200884B1 is a Korean patent titled “Light emitting diode and light emitting display device and method for driving the same” that cites KR100580956B1 and identifies “LG DISPLAY CO., LTD.” as the applicant and a filing date of June 14, 2006. LG Display admits that KR101390316B1 is a Korean patent titled “AMOLED and driving method thereof” that cites KR20040045352A and identifies “LG DISPLAY CO., LTD” as the applicant and a filing date of October 30, 2007. LG Display admits that KR101597037B1 is a Korean patent titled “Organic light emitting display for compensating electrical characteristics deviation of driving element” that cites DE10254511B4 and identifies “LG Display Co., Ltd.” as the applicant and a filing date of June 26, 2014. Except as expressly admitted, LG Display denies the remaining allegations, if any, contained in paragraph 20.

21. Denied.

22. LG Display admits that LG Electronics has invested in LG Display. LG Display admits that it has prepared and prosecuted patent applications. LG Display denies that the ’891 patent is relevant to the products designed by LG Display. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 22, and, on that basis, denies them.

23. Denied.

24. LG Display admits that JP5278119B2 is a Japanese Patent titled “Method of driving a display device” that cites DE10254511A and identifies “SONY CORP” as the applicant and a filing date of April 2, 2009. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 24, and, on that basis, denies them.

25. Denied.

26. Denied.

27. LG Display admits that it supplies OLED display panels that are incorporated in the Sony Bravia 55A1 OLED Television. Except as expressly admitted, LG Display denies the remaining allegations contained in paragraph 27.

28. Denied.

29. Denied.

30. No response is required to paragraph 30 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 29 of the Second Amended Complaint as set forth above.

31. LG Display admits the allegations contained in paragraph 31.

32. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 32, and, on that basis, denies them.

33. Denied.

34. LG Display denies that the Sony Bravia 55A1 OLED Television and the LG OLED55B7A OLED Television infringe any claim of the '068 patent. LG Display is without knowledge or information sufficient to form a belief as to any allegations regarding the Sony Trimaster EL PVM-A250 OLED Monitor or the Sony Electronic Viewfinder FDA-EV1MK and, on that basis, denies them. LG Display denies the remaining allegations contained in paragraph 34.

35. Denied.

36. LG Display admits that US10,103,212B2 is a United States Patent titled "Display device, method of manufacturing the same, and electronic apparatus" that cites US2006/0098521A1 and identifies "Sony Corporation" as the applicant and a filing date of July 16, 2014. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 36, and, on that basis, denies them.

37. Denied.

38. Denied.

39. Denied.

40. LG Display admits that LG Electronics has invested in and worked with LG Display. LG Display admits that it has prepared and prosecuted patent applications. LG Display denies that the '068 patent is relevant to the products designed by LG Display. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 40, and, on that basis, denies them.

41. Denied.

42. Denied.

43. LG Display admits that it supplies OLED display panels that are incorporated in the Sony Bravia 55A1 OLED Television. Except as expressly admitted, LG Display denies the remaining allegations contained in paragraph 43.

44. Denied.

45. Denied.

46. No response is required to paragraph 46 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 45 of the Second Amended Complaint as set forth above.

47. LG Display admits the allegations contained in paragraph 47.

48. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 48, and, on that basis, denies them.

49. Denied.

50. Denied.

51. Denied.

52. LG Display admits that US10,062,327 is a United States Patent titled "Data driver and organic light emitting display panel, display device, and driving method for sensing and compensating a mobility of the driving transistor" that cites US2006/0221015A1 and identifies "LG Display Co. Ltd." as the applicant and a filing date of May 27, 2016. LG Display denies the remaining allegations of paragraph 52.

53. Denied.

54. LG Display admits that LG Electronics has invested in and worked with LG Display. LG Display admits that it has prepared and prosecuted patent applications. LG Display denies that the '137 patent is relevant to the products designed by LG Display. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 54, and, on that basis, denies them.

55. Denied.

56. LG Display admits that US8345027B2 is a United States Patent titled "Image display device and driving method of image display device" that cites US2006/0221015A1 and identifies "Sony Corporation" as the assignee and a filing date of March 4, 2009. LG Display is without knowledge or information sufficient to form a belief as to the truth of the remaining allegations of paragraph 56, and, on that basis, denies them.

57. Denied.

58. Denied.

59. LG Display admits that it supplies OLED display panels that are incorporated in the Sony Bravia 55A1 OLED Television. Except as expressly admitted, LG Display denies the remaining allegations contained in paragraph 59.

60. Denied.

61. Denied.

62. No response is required to paragraph 62 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 61 of the Second Amended Complaint as set forth above.

63. LG Display denies that Solas is entitled to any relief because none of the asserted patents are valid, enforceable, or infringed.

64. No response is required to paragraph 64 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 63 of the Second Amended Complaint as set forth above.

65. LG Display denies that Solas is entitled to any injunctive relief because none of the asserted patents are valid, enforceable, or infringed.

66. No response is required to paragraph 66 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 65 of the Second Amended Complaint as set forth above.

67. LG Display denies that Solas is entitled to any relief because none of the asserted patents are valid, enforceable, or infringed.

68. No response is required to paragraph 68 including the preceding heading. To the extent that the Court deems a response necessary, LG Display incorporates by reference its responses to paragraphs 1 through 67 of the Second Amended Complaint as set forth above.

69. LG Display is without knowledge or information sufficient to form a belief as to the truth of the allegations of paragraph 69, and, on that basis, denies them.

70. LG Display also demands a trial by jury on all issues so triable.

71. Except as expressly admitted above, LG Display denies each and every allegation in Solas' Second Amended Complaint for Patent Infringement. In addition, LG Display denies any allegation that may be implied or inferred from the headings in the Second Amended Complaint.

72. LG Display denies that Solas is entitled to any relief in this action.

DEFENSES

LG Display asserts the following additional defenses without assuming the burden of proof on any issue that LG Display would not have otherwise, including without admitting or acknowledging that it bears the burden of proof as to any of them. LG Display incorporates the admissions and denials in paragraphs 1 through 72, above.

FIRST DEFENSE

73. LG Display does not infringe, and has not infringed (either directly, contributorily, or by inducement), either literally or under the doctrine of equivalents, and is not liable for infringement of any valid and enforceable claim of the Patents-in-Suit.

SECOND DEFENSE

74. Each claim of the Patents-in-Suit is invalid for failure to satisfy one or more of the conditions of patentability, including without limitation those set forth in 35 U.S.C. §§ 101, 102, 103, and/or 112.

THIRD DEFENSE

75. Solas' claims are barred in whole or in part by the doctrine of disclaimer.

FOURTH DEFENSE

76. Solas' claims are barred in whole or in part by the doctrine of prosecution history estoppel.

FIFTH DEFENSE

77. Plaintiff is not entitled to enhanced damages under 35 U.S.C. § 284, at least because Plaintiff has failed to show, and cannot show, that LG Display has intentionally, willfully, or deliberately infringed any valid and enforceable claim of the Patents-in-Suit.

SIXTH DEFENSE

78. Solas' claim for damages is barred, in whole or in part, by 35 U.S.C. § 286.

SEVENTH DEFENSE

79. Solas' request for a permanent injunction is barred in whole or in part by the doctrine of laches.

EIGHTH DEFENSE

80. Solas' claims are barred in whole or in part by a failure of the owner and/or licensee of the Patents-in-Suit to mark relevant products as required by 35 U.S.C. § 287.

NINTH DEFENSE

81. To the extent that Solas' claims are directed to acts occurring outside the United States, those claims for relief are barred or limited by the doctrine of territoriality by 35 U.S.C. § 271 et seq., including but not limited to § 271(a) and (c).

OTHER DEFENSES RESERVED

82. LG Display reserves the right to assert additional defenses if such defenses are discovered during litigation.

COUNTERCLAIMS

For its counterclaims, LG Display alleges:

PARTIES

1. LG Display is a Korean corporation organized under the laws of Korea, with its principal place of business in LG Twin Tower 128, Yeoui-daero, Yeongdeungpo-gu, Seoul 07336, South Korea.

2. Solas is a corporation organized and existing under the laws of Ireland, with its headquarters at 4-5 Burton Hall Road, Sandyford, Dublin 18.

JURISDICTION AND VENUE

3. This is an action for patent infringement under the patent laws of the United States, including 35 U.S.C. §§ 271 and 281 *et seq.*

4. Solas is subject to personal jurisdiction, and venue is proper as to Solas in this district.

FIRST COUNTERCLAIM

Declaration of Non-infringement of the '891 Patent

5. LG Display incorporates paragraphs 1 through 4, above.

6. Solas alleges it is the owner of the '891 patent.

7. Solas has asserted the '891 patent against LG Display in this action, alleging that LG Display has infringed and/or infringes, directly and/or indirectly, the '891 patent.

8. LG Display has not infringed and does not infringe, directly or indirectly, any claim of the '891 patent.

9. For example, and without limitation, LG Display does not infringe claim 1 of the '891 patent because the accused products do not comprise “feedback coupling” or a “third thin film transistor which during driving its gate through a driving conductor taps a diode driving

current at an output of said first current-driving transistor and supplies a current measuring- and voltage regulating circuit, said current measuring- and voltage regulating circuit providing to the data conductor a voltage signal which is dependent on a current measuring result and a voltage comparison, so that the diode during driving of said gate of said third transistor due to its non-linear switching characteristic acts as a switch for a current deviation in said current measuring- and voltage regulating circuit.”

10. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the ’891 patent, and that controversy is ripe for adjudication by this Court.

11. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas’ accusations have caused, LG Display is entitled to a declaratory judgment that it does not infringe and has not infringed any claim of the ’891 patent.

SECOND COUNTERCLAIM

Declaration of Invalidity of the ’891 Patent

12. LG Display incorporates paragraphs 1 through 11, above.

13. Solas alleges that the claims of the ’891 patent are valid and enforceable.

14. Each of the claims of the ’891 patent is invalid for failure to comply with one or more requirements of the patent laws of the United States, including but not limited to 35 U.S.C. §§ 101, 102, 103, and 112.

15. For example, and without limitation, the claims of the ’891 patent, including claim 1, are rendered obvious by U.S. Patent Application Publication No. 2002/0101172 to Bu alone or in combination with other prior art and/or the knowledge of a person of ordinary skill in the art.

16. Furthermore, the claims of the ’891 patent are invalid under 35 U.S.C. § 101 at least because they are directed to the abstract idea of regulating an input using measurement-based feedback, and lack an inventive concept that could transform those claims into a patentable invention.

17. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the '891 patent, and that controversy is ripe for adjudication by this Court.

18. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas' accusations have caused, LG Display is entitled to a declaratory judgment that one or more claims of the '891 patent are invalid.

THIRD COUNTERCLAIM

Declaration of Non-infringement of the '068 Patent

19. LG Display incorporates paragraphs 1 through 18, above.

20. Solas alleges it is the owner of the '068 patent.

21. Solas has asserted the '068 patent against LG Display in this action, alleging that LG Display has infringed and/or infringes, directly and/or indirectly, the '068 patent.

22. LG Display has not infringed and does not infringe, directly or indirectly, any claim of the '068 patent.

23. For example, and without limitation, LG Display does not infringe claim 13 of the '068 patent because the accused products do not comprise "a plurality of feed interconnections" or "a plurality of supply lines which are patterned together with the sources and drains of said plurality of driving transistors and arrayed to cross said plurality of signal lines via the gate insulating film, one of the source and the drain of each of driving transistors being electrically connected to one of the supply lines."

24. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the '068 patent, and that controversy is ripe for adjudication by this Court.

25. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas' accusations have caused, LG Display is entitled to a declaratory judgment that it does not infringe and has not infringed any claim of the '068 patent.

FOURTH COUNTERCLAIM

Declaration of Invalidity of the '068 Patent

26. LG Display incorporates paragraphs 1 through 25, above.

27. Solas alleges that the claims of the '068 patent are valid and enforceable.

28. Each of the claims of the '068 patent is invalid for failure to comply with one or more requirements of the patent laws of the United States, including but not limited to 35 U.S.C. §§ 102, 103, and 112.

29. For example, and without limitation, the claims of the '068 patent are rendered obvious by PCT Patent Application No. WO 03/079441 to Childs, alone or in combination with other prior art and/or the knowledge of a person of ordinary skill in the art.

30. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the '068 patent, and that controversy is ripe for adjudication by this Court.

31. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas' accusations have caused, LG Display is entitled to a declaratory judgment that one or more claims of the '068 patent are invalid.

FIFTH COUNTERCLAIM

Declaration of Non-infringement of the '137 Patent

32. LG Display incorporates paragraphs 1 through 31, above.

33. Solas alleges it is the owner of the '137 patent.

34. Solas has asserted the '137 patent against LG Display in this action, alleging that LG Display has infringed and/or infringes, directly and/or indirectly, the '137 patent.

35. LG Display has not infringed and does not infringe, directly or indirectly, any claim of the '137 patent.

36. For example, and without limitation, LG Display does not infringe claim 10 of the '137 patent because the accused products do not comprise "a gradation signal generation circuit which generates a gradation current having a current value for allowing the optical element to perform a light emitting operation at a luminance corresponding to a luminance gradation of the

display data, as a gradation signal corresponding to the luminance gradation of the display data, and supplies the gradation current to the display pixel through a data line connected to the display pixel” or “a threshold voltage detection circuit which detects a threshold voltage peculiar to the drive element of the display pixel through the data line.”

37. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the '137 patent, and that controversy is ripe for adjudication by this Court.

38. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas' accusations have caused, LG Display is entitled to a declaratory judgment that it does not infringe and has not infringed any claim of the '137 patent.

SIXTH COUNTERCLAIM

Declaration of Invalidity of the '137 Patent

39. LG Display incorporates paragraphs 1 through 38, above.

40. Solas alleges that the claims of the '137 patent are valid and enforceable.

41. Each of the claims of the '137 patent is invalid for failure to comply with one or more requirements of the patent laws of the United States, including but not limited to 35 U.S.C. §§ 102, 103, and 112.

42. For example, and without limitation, each and every claim of the '137 patent is invalid under 35 U.S.C. §§ 102 and/or 103 as anticipated and/or rendered obvious by U.S. Patent No. 7,358,941 to Ono alone or in combination with other prior art and/or the knowledge of a person of ordinary skill in the art.

43. An actual case and controversy exists between Solas and LG Display based on Solas having alleged infringement of the '137 patent, and that controversy is ripe for adjudication by this Court.

44. To resolve the legal and factual questions raised by Solas and to afford relief from the uncertainty and controversy that Solas' accusations have caused, LG Display is entitled to a declaratory judgment that one or more claims of the '137 patent are invalid.

REQUEST FOR RELIEF

45. LG Display respectfully requests the following relief:
- A. That Solas take nothing on its Complaint;
 - B. That the Court dismiss each and every claim related to LG Display in Solas' Complaint with prejudice;
 - C. A declaration that LG Display has not infringed and does not infringe, literally or under the doctrine of equivalents, directly or indirectly, any valid enforceable claim of the '891 patent;
 - D. A declaration that the '891 patent is invalid;
 - E. That the Court limit or bar Solas' ability to enforce the '891 patent in equity;
 - F. A declaration that LG Display has not infringed and does not infringe, literally or under the doctrine of equivalents, directly or indirectly, any valid enforceable claim of the '068 patent;
 - G. A declaration that the '068 patent is invalid;
 - H. That the Court limit or bar Solas' ability to enforce the '068 patent in equity;
 - I. A declaration that LG Display has not infringed and does not infringe, literally or under the doctrine of equivalents, directly or indirectly, any valid enforceable claim of the '137 patent;
 - J. A declaration that the '137 patent is invalid;
 - K. That the Court limit or bar Solas' ability to enforce the '137 patent in equity;
 - L. That the Court declare that this case is exceptional under 35 U.S.C. § 285 and award to LG Display its reasonable costs and expenses of litigation, including attorneys' fees, expert witness fees and other expenses incurred in connection with this action;
 - M. That the Court grant LG Display pre-judgment and post-judgment interest on all amounts awarded; and

N. That the Court award LG Display any other and further relief the Court may deem just and proper.

JURY DEMAND

46. LG Display demands a trial by jury on all issues so triable.

Respectfully submitted,

/s/ Jennifer H. Doan

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**ATTORNEYS FOR DEFENDANTS
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CORPORATION**

CERTIFICATE OF SERVICE

The undersigned certifies that on the 28th day of October, 2019, I electronically filed this document with the Clerk of Court via the Court's CM/ECF system which will send notification of such filing to all counsel of record, all of whom have consented to electronic service in this action.

/s/ Jennifer H. Doan

Jennifer H. Doan